## **Claims**

What is claimed is:

- 1. A computing system comprising:
  - a tabular data stream (TDS) protocol that comprises:
    - a multiple active result set (MARS) header, and
- a data field that is part of the MARS header and identifies a number of pending requests known by a client to a server, the MARS header is employed to synchronize execution of queries for communication between the client and the server, regardless of buffer size for the client and the server.
- 2. The system of claim 1, the TDS protocol further comprises a transaction descriptor header that enables a plurality of active transactions under a single session.
- 3. The system of claim 1, the TDS protocol supports a chunked data type within the communication data stream.
- 4. The system of claim 1, the TDS protocol further comprises an environmental change event feature that is sent to the client when a transactional state of the server changes.
- 5. The system of claim 5, the state of server changes when a connection is reset to another server as part of a data base mirror environment.
- 6. The system of claim 1, the client cancels a command being currently executed *via* transmittal of a non severe attention signal without a connection drop of the communication.
- 7. The system of claim 1, the client executes a remote procedure call on the server.
- 8. The system of claim 1, the client requests a connection to enlist in a distributed transaction coordinator (DTC).

- 9. The system of claim 1, the TDS protocol enables a change of order for parameters outputted from the server, and retrieval of parameters from an application programming interface (API) of the network environment.
- 10. The system of claim 1, the TDS protocol specifies a new password as part of a login procedure when an old password is presented.
- 11. A computing system comprising:

a server in communication with a client *via* a tabular data stream (TDS) protocol in a network environment; and

the TDS protocol comprising a query notification header with a data field that requests updates related to a query at a time the communication is initially established.

- 12. The method of claim 11 the query notification establishes channels and setup for the updates sent by the server to the client.
- 13. The system of claim 11, the query notification header enables development of caching layers on top of SQL server applications such that the caching layer remain transparent to the client.
- 14. A method for establishing communication between a server and a client *via* a tabular data stream (TDS) protocol comprising:

assigning a major number and a minor number to the TDS protocol based on a release date and a software version thereof;

determining the major number and minor number for the client and the server; negotiating down to the TDS protocol common to the server and the client based on comparing respective major numbers and minor numbers; and,

initiating handshake via the TDS protocol common to the server and the client.

15. The method of claim 14, the major number having a 0xNN format and the minor number having a 0x000M format, with M, N being integers.

- 16. The method of claim 14 further comprising providing an increment number as a further designation associated the communication protocol.
- 17. The method of claim 16, the increment number has a 0xFF format, F being a 4-bit hexadecimal value..
- 18. A method for canceling a specific tabular data stream (TDS) request in a client server network comprising:

sending a non severe attention signal by a client to a server; continuing a read of data by the client;

receiving an acknowledgment by the client sent from the server in response to the sending act; and

canceling the request without affecting state of a current transaction between the client and the server.

- 19. The method of claim 18 further comprising discarding buffers received by the client after sending the non-severe attention signal.
- 20. The method of claim 19 further comprising discarding buffers received by the client before receiving the acknowledgement.
- 21. A method of changing a password in a client server network comprising: specifying a new password as part of a login procedure; verifying a previous password as part of the login procedure; and initiating handshake and session establishment with the new password.

- 22. A method for re-setting a client driver comprising:
  setting an attention bit in a TDS header of a packet sent by a server to a client;
  notifying the client *via* the attention bit of a desire to abort a current request; and
  canceling the current request without dropping an entire connection between the
  server and the client.
- 23. A computing system comprising:
  means for issuing a query by a client;
  means for processing the query by a server; and
  means for sending the query results to the client such that the client and server are
  synchronized regardless of a buffer size of the computing system.
- 24. A computing system comprising:

  means for issuing a query by a client;

  means for processing the query by a server; and

  means for sending the query results to the client such that a current command
  being executed as part of the query is cancelable without dropping a connection
  established for the query.
- 25. A designator for a tabular data stream (TDS) protocol comprising: means for identifying a TDS protocol based on a release date and a software version; and means for determining a TDS protocol common to a server and a client.